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Address.



I AM delighted once again at the response from the BBC Micro Industry to your successful show. This reflects, I believe, the unique fervour felt by all those associated with this unique product.

I am happy to tell you also that Electrons are being produced in ever increasing numbers and their buyers are now swelling the ranks of Acorn enthusiasts.

This month has seen the launch of two important new add-ons for the BBC Micro — the long awaited 6502 second processor and the powerful Acorn Bitstik graphic tool that utilizes the extra power of the second processor so dramatically.

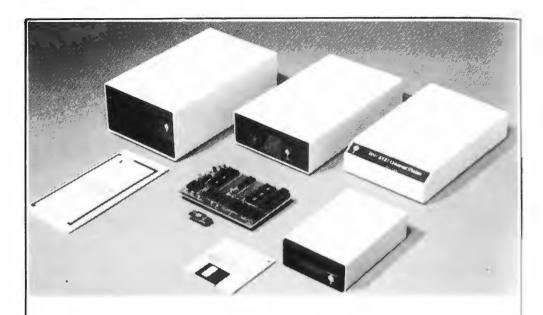
Once again the appeal of the machine has been widened now that more complex programs can be run with no trade-off on high resolution graphics.

Within the next couple of months we will be launching further add-ons such as a Prestel adapter and a Z80 second processor which turns the BBC Micro into a business computer running CP/M programs.

Such exciting developments ensure a long life for the BBC Micro and a fresh challenge for its users and suppliers.

I know this show will be another success and I wish you all "happy computing".

Tom Hohenberg, Marketing Manager, Acorn Computers



## SHOW OFFER 10% OFF

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## STAND 50



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## COMPUTER VILLAGE

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# Classes move into the electronic age

In addition to providing a networked group of computers, the **Electronic Classroom illustrates** how the blackboard may be replaced using video techniques.

THE Electronic Classroom takes education into the 1990s. Presented in a traditional classroom environment, this major exhibit demonstrates how microtechnology may be used to good advantage in education.

The Symbiotic networking system offers all the advantages of conventional teaching methods, together with the advantage of allowing each pupil to progress at their own rate.

All the computers are linked to a central storage device which keeps track of each student's progress, allowing the teacher to analyse performance at a later date.

A large amount of educational software will be on hand to allow teachers from any discipline to witness how the system works in a real life teaching situation.

Any naughty pupils had better watch out!

The Classroom comes complete with its own computer-controlled robot, a strict disciplinarian who has not heard of the abolition of corporal punishment.

Whether you are a sixth form student or headmaster of a large comprehensive school, the opportunity to experience first hand these many advantages should not be missed.

We are indebted to Flickers Video for the loan of the projection system and to National Micro Centres for the loan of the BBC computers in this exhibit.

# STSTEM

# BBC are Software



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AN attempt to set a world record for non-stop playing of computer games — linked to medical research on the current craze — will be seen by visitors during the first morning of the show.

For at noon on March 29, 14-year-old Derek Creasey hopes to have completed a 24 hour marathon session at a BBC Micro which will get him into the Guinness Book of Records.

The Stockport schoolboy will in fact start his self-inflicted round the clock ordeal at noon on the previous day on the Symbiotic stand.

During the time Derek plays, he'll be wired up to a second computer for controlled medical monitoring to analyse the effect of playing electronic games over a prolonged period.

"We want to establish once and for all whether playing computer games for a long time can prove harmful", says Mike Cowley, a spokesman for Database Publications, organisers of the Electron and BBC Micro User Show.

"After all, kids all over the country are playing these games for hours on end and some people have suggested that this might be creating medical problems for them.

"So at the end of 24 hours, we'll have a full readout ready for analysis and we'll be able to establish whether or not the current craze is in fact potentially dangerous as people have claimed".

Meanwhile rugby playing Derek is in training for the marathon event.

"I've been doing press ups and generally trying to get into top shape", he says.

"The only problem I foresee is keeping awake but fortunately the games are sufficiently exciting to keep me on my toes for 24 hours".

One person who isn't sure he'll be able to set the record is his mother Ann Creasey.

"He's fit enough", she says. "But I do have a bit of trouble getting him out of bed in the mornings..."



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The adaptor box joins together the analogue and the user ports to use the full keypad giving a total of 24 user definable keys. The adaptor box can also be used as a splitter for the A/d port to take two items at the same time, e.g. joystick and lightpen.

**Voitmace***delta 1***4b** 



# There'll be four more - in '84!

Yes, so much is happening in the exciting, enthralling ever-changing world of the Electron and BBC Micro that four more user shows are planned for the rest of 1984 - three in London and one in Manchester.

Make a note of these dates:

July 19-22: Alexandra Palace. London

Aug 31-Sept 2: UMIST, Manchester

October 25-28: Alexandra Palace. London.

**December 6-9:** New Horticultural Halls, London.

If you want to keep bang up-to-date on all the latest developments affecting the Electron and the BBC Micro, you mustn't miss these shows, which will be supported by all the leading manufacturers, suppliers and dealers of hardware and software.

At each show you'll find something new and exciting, as more products are produced to continually extend the frontiers of micro-technology.

Look out for more details of what you'll be able to see at

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SPELLCHECK in P.C.N. February 1984.



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**EDUCATIONAL COMPUTING, March 1984.** 

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"This really was enjoyable to play... a genuine element of strategy is required".

SNORTER, P.C.N. March 1984

PO Box 109, High Wycombe, Bucks.



## WHO'S WHERE —



### AT THE SHOW

Exhibitor	Stand	Exhibitor Stai	na
Advanced Memory Systems Alligata Software Alpha Disk	120	L C L	61
BBC Telesoftware Beebugsoft Bel Tech Software British Micro Bucon Ltd		Mr Floppy M W Systems Ltd MUG's (Micro User Groups) M R M Software Micro Aid Micro Power Micro Simplex Micro User Technical Advice	36 14 93 16 64
CTS Recognition CWP Ltd C-Tech Cambridge Microcomputer Centre Clwyd Technics Computer Agencies Computer Bookshop Computer Concepts Computer Village	38 121 85 122 5 116	Microage MEP (Microelectronics Education Programme) Microvitec Microware Miniature Tool Company Minor Miracles 1	73 26 18 97 71
Computasolve Control Universal Cumana	44 84	National Micro Centres Newnes Technical Books Newsoft 1:	60 37
Datapen Microtechnology Display Distribution Double Mode Dynabyte Software	33 69	O I C Ltd         9           Oakleaf Computers         9           Optima Software         1           Opus Supplies         1           Pace Disk Systems         1	45 33 17
Electron User Economatics Electronequip Electronic Classroom	77 70	R D laboratories	58 10
First Byte Computers	134	Silent Computers 1. Solidisk Ltd	59
G.C.C. (Cambridge) Ltd Gnomonica Golem Ltd Granada Publishing	9 2	Signpoint	90 12 31
Integrex Ltd		Viglen Computers Watford Electronics Watford Technical Books Wiseowl Publications	28 54 . 6

# STAND-BY-STAND GUIDE

#### Stand 2

**Golem,** 77 Qualitas, Bracknell, Berkshire RG12 4QG. Tel: 0344 50720.

Golem will be launching their new cassette Jigsaw and Sliding Puzzles to add to their range of educational titles, adventure game and utilities. All the software has been produced with care and attention given to detail, especially important when preparing educational programs, which are successfully used in thousands of schools and homes throughout the country. Cassette titles include: Educational 1, Educational 2, Fun with Words, Games of Logic, Katakombs and Superlife. All are available on disc.

#### Stand 3

**Granada Computer Books,** 8 Grafton Street, London W1X 3LA. Tel: 01-493 7070.

Granada lead the field in personal computer books. Our full list, including many titles concerning the use of the BBC Micro and the Electron, will be on show on Stand Number 3, where we welcome visits from wholesalers, retailers, and the general public. Software packs from Collins Educational will also be displayed.

#### Stand 4

Wise-Owl, Hull Innovation Centre, Queens Gardens, Hull. Tel: 225607 (0482).

Available at the show will be copies of the book "A Hardware Guide for the BBC Microcomputer". This A4 size, 260 page book contains details on hardware aspects of the BBC Micro including upgrading details for Model A to B and installing speech and disc expansions. There is a detailed circuit description, supplemented by manufacturers data sheets on major IC devices and a chapter describing many hints, tips and modifications. Book price is £11.95. Wise-Owl will also exhibit a range of add-ons for the BBC Micro, including interface boxes, fast A/D converter and a novel screen scroller.

#### Stand 5

Computer Agencies, 29 Sun Street, Hitchin, Hertfordshire.

Computer Agencies have on display a graphics planner for the BBC Micro and Acorn Electron known as Pixel Pad. Each pad contains 50 A3 sheets, each sheet comprising a screen layout showing every print and plot coordinate and twelve  $8\times 8$  user defined graphics grids. On the back of the cover is a useful summary of graphics commands. Also on display is a handy A5 pad containing 800 user defined graphics grids.

#### Stand 6

Watford Technical Books, 105 St. Albans Road, Watford, Hertfordshire WD1 1RD. Tel: 0923 23324.

We are a bookshop specialising in electronics and computing, with over 1500 different titles regularly in stock. Come to Watford and browse at leisure or order from our catalogue on Prestel from page 28844. Telephone and mail orders are welcome.

#### Stand 7

LCL, 26 Avondale Avenue, Staines, Middlesex TW18 2PW. Tel: 0784 58771.

Come to the LCL stand to see the only complete O

level maths course in the world. It is called Micro Maths and it is sold in 24 countries. LCL specialise in educational software and have software suitable for infants to adults. Many titles are being sold at special show prices. Come and see the moving, chuffing trains of Animated Arithmetic and 3D graphics of Picture Puzzles. See also the best-selling book Brainteasers that has had such good reviews.

#### Stand 8

Signpoint, 166A Glyn Road, London E5. Tel: 01-986 8137

For the latest in value for money Hardware add-ons available for the Acorn Electron be sure to visit the Signpoint stand. On show will be the outstanding Joyport that will work with 80 per cent of arcade games software using Atari style 9 pin joysticks all at the unbeatable price of £16.95. Also be sure to see a demonstration of Printport, the Centronics printer interface on sale at only £44.10. We will also be displaying various BBC Micro peripherals such as eprom programmers, disc drives, speech boxes and assorted literature.

#### Stand 9

**Gnomonica,** 2 Stable Cottages, Pleystowe, Capel, Dorking, Surrey RH5 5HE, Tel: 0306 712317.

You won't find any games on the Gnomonica stand, but some powerful new utility and scientific software will be on show. If you are interested in machine code programming (yours or other peoples) you must go and see Mach1, a feature-packed new 16k ROM. Simple to use for learning machine code, for developing complex software or for reducing any program to source code format.

DAP1, DAP2 and Tabler are new packages that realise the full graphics and data-handling potential of the Beeb giving graph-plotting, function sketching and database facilities with applications in science, education and the home.

#### Stand 11

Mr Floppy, London Road, Brandon, Suffolk. Tel: 0842 810415.

Mr Floppy is a full line of 8in and  $5\frac{1}{4}$  in discs in single double or quad density. In addition each Mr Floppy incorporates a jacket and liner design, which is self cleaning. Each sale is backed by Mr Floppy Technical Support. Mr Floppy Discs are manufactured on only the most modern machinery, starting with premium magnetic base material, using the industry's most advanced burnishing techniques to flatten those microscopic peaks and provide a glass smooth even surface for head conformance.

#### Stand 12

Tom Shipman (Supplies), P.O. Box 406, Brentwood, Essex CM13 3QE.

TSSL produce quality educational software to run on the BBC B, the Electron and the Spectrum, for use in the classroom and home environment. Our programs have been developed by students, who understand the requirements of educational software. TSSL are on

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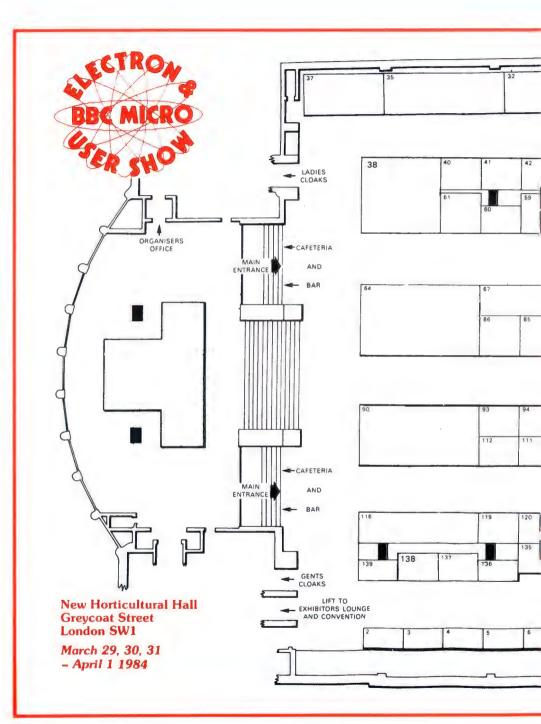
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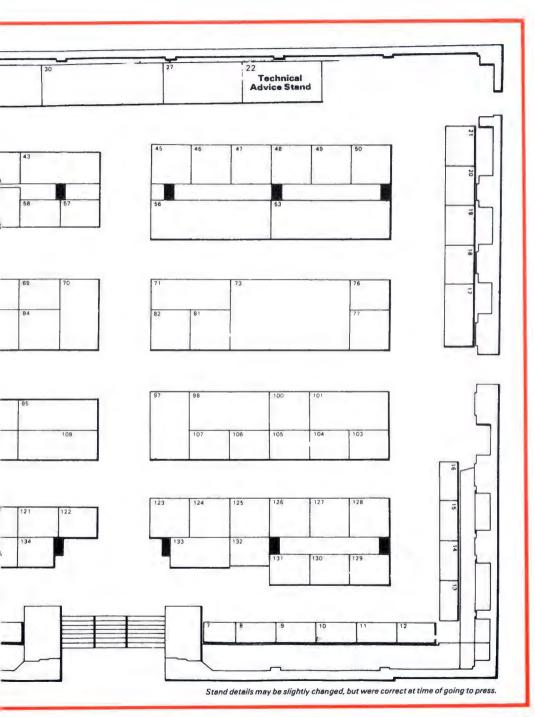
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#### Stand 13

Dynabyte, 31 Topcliffe Mews, Wide Lane, Morley LS27 8UL. Tel: 0532 535401.

Dynabytes fast growing range of software now covers 12 programs, seven for the BBC Micro and five for the Electron. Their latest release Tankzone, a three-dimensional wire graphics tank game, is being unveiled to the general public at this show and should prove to be a winner. Other favourites such as Pool and Horserace will also be on show together with the recently-released Lemming Syndrome and Corporate Climber. Games authors however will doubtless be more interested in the useful Multi-Aid and Electron-Aid utility packages which will also be demonstrated.

#### Stand 15

Datapen Microtechnology, Kingsclere Road, Overton, Hants RG25 3JB. Tel: 0256 770488.

Datapen will be demonstrating their lightpens and programs for the BBC Micro. Latest additions to the range of programs for use with the lightpen will include Beebpen, Britain and Teletext Creator. Britain will be especially interesting to educationally biased visitors and is the first in a range of geography and geology programs intended for use in schools with the Datapen lightpen. A hardware interface to enable Atari-type joysticks to be used on the BBC Micro will also be demonstrated.

#### Stand 16

Micro-Aid, 25 Fore Street, Praze, Camborne, Cornwall TR14 OJX. Tel: 0209 831274.

Micro-Aid which was formed in 1978, helps people understand the use of micro's by giving "Aid". Compiler, Datasafe, Spell-Check, Cashbook, Memo-Calc, Mailing, Statistics, French Abroad, Utilities, Flags, Distances, International Hangman and more. Valuable programs written by ourselves for you. In addition to our own software we offer a range of ROMs such as Wordwise, Pascal, Forth, Logo/Forth and others as well as peripherals which have been proven in use. These include Epson and new Seikosha printers, colour and mono monitors, disc drives and filing systems as well as listing paper, cassettes and discs. We know your problems and are pleased to help you. High prices don't make good programs – good understanding programmers do.

#### Stand 17

**Opus Supplies,** 158 Camberwell Road, London SE5 OEE, Tel: 01-701 8668.

Opus will be launching their double density disc interface at the show. Specially developed by us the Opus DDOS effectively doubles the capacity on your drive. Totally Acorn-compatible it has many features and means that we can offer you an 800k drive system including interface at an unbeatable price. Opus drives have gained an enviable reputation for quality and reliability — all will be available at the show — and as

usual you can be sure of tremendous value for money by buying from us. We will also be selling JVC RGB colour monitors — medium and high resolution, monochrome monitors, floppy discs and much more — a stand not to miss.

#### Stand 18

Microvitec, Futures Way, Bolling Road, Bradford, West Yorkshire. Tel: 0274 390011.

Microvitec as well as exhibiting the enormously popular Cub 452 will also have on this stand the Cub 653. Cub 895 and RGB/composite video monitors, all of which are being used increasingly in schools, colleges and universities. Cub 653 provides the ideal specification for the majority of micros and personal computers with high resolution colour and 80 column capabilities. Cub 895 is designed for professional people with specialist requirements. RGB/composite video model which is specifically designed for use with a video cassette recorder, combines exceptional true-to-life picture reproductions, with crisp well-defined displays of computergenerated text, plus high revolution graphics.

#### Stand 21

HCR Electronic Services, The Industrial Unit, Parker Road, Chelmsford, Essex CM2 OES. Tel: 0245 350188. Eprom programmer for BBC B. Sideways ROM extension RAM/ROM card for BBC.

#### Stand 27

Microelectronics Education Programme, Cheviot House, Coach Lane Campus, Newcastle-on-tyne NE2 3JA. Tel: 664716.

The MEP was initiated in 1981 and is currently due to end in March, 1986. It is financed by the Department of Education and Science of England, Northern Ireland and Wales, and administered by the Council for Educational Technology. The aim of the programme is to help schools to prepare children for life in a society in which devices and systems based on microelectronics are commonplace and pervasive. In addition, the programme aims to help teachers to use the technology to encourage learning in the children they teach.

#### Stand 30

Viglen, Unit 7, Trumpers Way Hanwell, London W7 20A. Tel: 01-843 9903.

Viglen offer the most comprehensive and lowest priced disc drives for the BBC Micro. The drives are cased and fully tested at our factory in London from where you can purchase either by mail order or by calling personally at the premises. Viglen also offer full servicing capabilities and are a very friendly and helpful company.

#### Stand 35

**Display Distribution,** 35 Grosvenor Road, Twickenham, Middlesex TW1 4AD. Tel: 01-891 1513/891 1923.

Display Distribution will be showing the complete range of Novex monitors. Since their showing at the last BBC Micro User Show many thousands of models have been sold. They have all proved to be good reliable products, and not a single day goes by without us receiving referals. All current models are metal cased and of pleasing appearance and all with one exception have carrying handles for ease of portability. Our dealer

network is expanding daily, and by the end of 1984 we aim through them, to be able to offer a complete national sales and service backup second to none.

#### Stand 37

M W Systems, Matrix House, Lincoln Road, Cressex Industrial Estate, High Wycombe, Tel: 0494 450341.

M W Systems have established themselves as a leading supplier of disc systems and peripherals for the BBC Micro. And have recently released the new Epson floppy disc drive which is a double sided 40 track drive giving 200k formatted capacity for only £159. See this along with our complete range of disc systems.

#### Stand 38

C/WP Computers, Willow House, Willow Place, London SW1P 1JH. Tel: 01-828 9000.

C/WP will be offering a wide range of peripherals for home computers. In addition, specialist business systems will be demonstrated, featuring Wordstar and dBase 11. Peripherals available for sale include Epson printers from £289 inc VAT; Star printers, £239 inc VAT Juki daisy wheel printers at £379 inc VAT; floppy discs from £13 inc VAT; disc drives for the BBC, £178 inc VAT.

#### Stand 40

Micro-Simplex

At last, for users of the Simplex "D" Cash 800k and many other retailers and smaller businesses, we are able to offer Micro-Simplex on the BBC B. You will require a dual track disc drive and printer and you will then have a powerful business system. Micro-Simplex will analyse your takings, look after your payments in cash and cheque, prepare your Vat return automatically for Schemes "A" to "F", record your unpaid bills and produce a profit and loss account any time you want. Priced at £200 plus VAT normally, the program is offered at £150 including VAT for the show.

#### Stand 41

Computer Bookshops, 30 Lincoln Road, Olton, Birmingham B27 6PA, Tel: 021-707 7544.

Computer Bookshops Limited Wholesales books and software to the retail trade and offers titles from approximately 40 major US and UK Publishers besides being sole UK distributors for Sybex and Compusoft Publishing. Best selling books relevant to the BBC and Electron will be on display and also titles covering general books in microcomputing and other popular home computers.

#### Stand 42

**Bel-Tech,** Stanmore Industrial Estate, Bridgnorth, Shropshire WV15 5HP. Tel: 07462 5420.

Bel-Tech is a new software company aimed at the serious hobbyist. Our current collection of programs covering genealogy, graphics, database and O level chemistry will be on display at our stand. We are sure this professional product will stand out from the crowd and we look forward to seeing you during this current exhibition.

#### Stand 44

Computasolve, 8 Central Parade, St. Marks Hill, Surbiton, Surrey KT6 4PJ. Tel: 01-390 5135.

JCB Digger . . . Second Processors . . . Electron . . .

Sinclair QL...ZX Microdrives... Elan Enterprise might be figments of the imagination, but you will find on our stand one of the largest selections of software and hardware at the show. Also on display are our two latest releases for the Model B, which are Birdie Barrage, a graphic simulation of the game of golf, and Draftmate, an extremely powerful drawing utility which allows you to create pictures for use in your own programs. All of the products are available from our retail shop in Surbiton.

#### Stand 45

Oakleaf Computers, Bell's Yard, Dysart Road, Grantham, Lincolnshire NG31 7EJ. Tel: 0476 60000.

Oakleaf Computers are one of the oldest established companies supplying Acorn products having been dealers since the days of Atom and systems one, two, three and four. Like Acorn, Oakleaf have taken large technical steps forward and as an Approved Econet Centre are one of the UK's leading suppliers. On our stand you will find many exciting and exclusive products particularly in peripheral devices such as joysticks, colour printers and specialist software. We look forward to seeing you.

#### Stand 46

BBC Telesoftware, Television Centre, Wood Lane, London W12 8QT. Tel: 01-743 8000.

BBC Staff will be on hand to demonstrate the latest programs from the BBC Telesoftware service. Using a Teletext adaptor, users can try out interactive programs from the BBC Ceefax service.

#### Stand 51

National Micro Centres, National House, 36-38 St Petersgate, Stockport SK1 1HL. Tel: 061-429 8080.

One third of the National Micro Centres' stand is devoted to the educational users of the BBC Micro and the Electron, including an operational example of networking. Also being demonstrated is the unique Chameleon, the colour palette that extends the range of colours available on the BBC Micro from 16 to an amazing 4096, and Grafpad, which enables you to prepare precision drawings on your computer and print them out. Gordon Mackenzie, NMC's Educational Sales Manager, will be present to answer questions and give full details of the specialised service we offer educational authorities. Micronet is also on display. Modems and software can be purchased on the spot, and Prestel applications prepared. You can use Micronet to place direct orders for items not at the show - for immediate delivery. You can also choose from a wide range of software for both the BBC Model B and the Electron, including the latest available titles from Acornsoft, Micropower, BBC Soft and other leading suppliers. Discs, disc storage boxes, monitor stands and many other accessories are also available. All the information you need is on Prestel number 61429B080.

#### Stand 56

Watford Electronics, 33 Cardiff Road, Watford, Herts WD1 8ED. Tel: 0923 40588/37774.

Watford Electronics – Your one stop shop. We are continually demonstrating and selling our Beeb Wordprocessing package, Mitsubishi Disc Drives (special offer), Printers, Modem 84, New ROM/RAM expansion

board, Z8OA 2nd processor board, EPROM programmer, speech synthesiser, the ultimate DFS ROM, Beebmon, printer ROM, Dump out 2 ROM, Epson Dump ROM, Buffer and Backup ROM (Star Launch), Beebfont ROM, Disassembler ROM, Wordwise, Disc-Data, printer driver for View, Disc Executor, Also on sale are: dust covers, data recorder stack-pak, discettes, lockable disc storage units, floppy head cleaners, micro plinth, joysticks, surge protector plugs, attache carrying case, light pen, Advance User Guide, DFS manual for BBC (comprehensive) and the great Pengo. Our Mr Jessa is in attendance.

#### Stand 57

Bucon, 35/36 Singleton Street, Swansea SA1 3QN. Tel: (0792) 467980.

Bucon design and market several products for the BBC computer, under the name of Merlin Computer Products. On show will be: Merlin Scribe, a superb professional word processor. The program is supplied in chip form and is the only word processor currently available specially designed for the BBC disc system. Also on show is a new Super Logo providing considerable advantage over present examples of the language. Merlins Database – a preview of the most advanced database program yet to be produced for the BBC disc system. It will be supplied in ROM either as a stand alone database, or integrated with Scribe. In the latter form, Scribe can be used to format reports which draw information from the database, as well as to provide a mailmerge facility.

#### Stand 59

Solidisk Technology, 17 Sweyne Avenue, Southend On Sea SS2 6JQ. Tel: (0702) 354676.

Sideways RAM systems have been described in detail in all *BBC Micro User* magazines and become de facto the way to upgrade the BBC computer. Solidisk Sideways RAM is the most popular and powerful implementation on the BBC computer. Occupying the same place as sideways ROMs (such as Basic, DFS etc) it is treated like other Sideways ROMs and therefore can replace sideways ROMs. The Sideways RAM is completely compatible with all issues of BBC computers, discs, all sideways ROMs, secondary processor, Torch disc pack, Teletext, Econet etc. but NOT with ROM extension boards, since it can replace them. Solidisk Sideways RAM comes with lots of free software, such as RAM disc, Multitasking, background printing, hi res graphic, ROM filling system, 100k wordprocessor and Silexicon, the fastest spelling checker on earth.

#### Stand 60

Newnes Technical Books, Borough Green, Sevenoaks, Kent TN15 8PH. Tel: 0732 884567.

Come and see the books we have available on all facets of BBC microcomputing including introductory and advanced Basic programming, machine code programming, cassette software and games routines. These titles are part of the wide product range that Newnes Technical Books publish for the microcomputer user in education, in business or at home.

#### Stand 61

Logic Sales, 19 The 8roadway, The Bourne, Southgate, London N14 6PH. Tel: 01-882 4942.

Logic Sales is one of London's finest microcomputer

stores. They will be showing a large range of software and peripherals for the BBC Model B and Electron at reduced prices.

#### Stand 68

Pace Software Supplies, 92 New Cross Street, Bradford BD5 8BS. Tel: 0274 729306.

Pace will be exhibiting their full range of BBC compatible disc drives, these being offered at attractive show prices. Also on sale will be Toolstar and demonstrations of 'Commstar', the new sophisticated communications software for use with the BBC E Net, the educational network using the GSL hard disc will also be exhibited. Pace will also be selling their new 3D game for the BBC 'Fortress'.

#### Stand 69

Doublemode, 16 Macadam Place, South Newmoor Industrial Estate, Irvine, Ayrshire KA11 4HP. Tel: 0294 216339

Manufacturers of factory reconditioned RGB colour monitors. Distributors for Hanimex. Show Offer: 20"/22"/26" monitors normally £97.75, show price f92. Hanimex computer cassette recorder with counter and remote socket normally £24.95, show price £21.85. Access and Barclaycard facilities. Trade enquiries welcomed. Educational discount. Computer Club discount.

#### Stand 70

Electronequip, 36-38 West Street, Fareham, Hants. PO16 0JW. Tel: 0329 230670.

Electronequip of Hampshire have been suppliers of Acorn products since the introduction of the Atom. They have introduced several of their own products on to the market:

Micro Disc Drive: 3" 80k micro disc drive faster than many 5.25" disc drives yet only costs £113 + VAT. Drive and Interface costs £173 + VAT. TV/Monitor: TV/Monitor is a television designed so that it can be used as a monitor as well as a TV. Cost £217 + VAT. Electronequip spacious premises at West Street Fareham include 20 station Econet and Torchnet systems which are on demonstration six days a week from 9am to 5.30pm as well as extensive stocks of BBC software and peripherals.

#### Stand 76

Shards Software, 189 Eton Road, Ilford, Essex IG1 2UQ. Tel: 01-514 4871.

We will be displaying our growing BBC and Electron range of games and educational software. Our Fun to Learn series, covering education from 6-16 year olds, now contains five packages, and is used in over a hundred schools, as well as in the home. We also offer BBC and Electron versions of Empire, our renowned Strategy game, and Pettigrews Diary, our epic three part adventure.

#### Stand 77

Economatics (Education) Ltd, 4 Orgreave Crescent, Dore House Industrial Estate, Handsworth, Sheffield S13 9NQ. Tel: 0742 690801.

The BBC Buggy is a mobile robot which takes the user into the exciting world of computer control. The Buggy, which comes in kit form, the assembly of which

## REEKIE TECHNOLOGY COMPANY

Beaufort Road of Richmond Road, East Twickenham, Middlesex TW1 2PH



# IMAGE Plotter

A simple, versatile drawing aid for use with your BBC model B microcomputer. (Please request details of use with other computers.) Ideal in the classroom for illustrating, drawing maps, enlarging diagrams. Have fun at home being your own designer. You can draw, trace, reduce or enlarge your designs. Save screen for screendump or reload. Suitable for adding extra software of your own. Use it like a traditional pantograph, but with all the added facilities of your micro. Includes software and full instructions.

Item	Description	Price (EA)	Qty	Total price inc. VAT
A	Image Plotter (Panta Graph) Software	(£43 + £6.45 VAT = £49.45)		

	Tape cassette	(Please tick)	Address:	
Name: _				

is a useful technical exercise in itself includes a suite of 13 highly accessible programs written in BBC Basic. They demonstrate various functions: Switching, memory, graphic development, programmable unit, information gatherer, problem solving and first steps towards artificial intelligence. Because the Buggy and its software are constructed on a building block principle there are many further hardware and software possibilities.

#### Stand 82

System, 12 Collegiate Crescent, Sheffield S10 2BA. Tel: 0742 682321.

System offers the best in educational software and programming utilities. The now famous Music Editor is here for you to see and try — with its mate Envelope Generator, both on cassette or disc. Programming enthusiasts will already know about ADE — the macro assembler, debugger, editor on 16k ROM for the BBC B. Come and see it demonstrated by fellow enthusiasts. NEW: 8k chips — ASM: the ADE assembler now on its own chip. Spy 2: all the features of the Spy debugger, dis-assembler plus new disc utilities. Easily the most cost effective debugger/utility ROM for the BBC Micro. Price held at the original Spy level for a limited period only — so buy now. BASF discs, with reinforcing rings here at the best prices: 40 or 80 track, single or double sided.

#### Stand 84

Control Universal, Andersons Court, Newham Road, Cambridge CB3 9EZ. Tel: 0223 358757.

Control Universal are the company behind the Cube range of real-world control boards. The range exceeds 30 Master Eurocards and includes both a 6502 second processor and a 6809 second processor — as well as memory, video, analog and digital i/o, eprom programming and discs. Eurobeeb, a 6502 second processor, is Eurocube with BBC Basic and RAM memory on board. The BBC Micro acts as a dumb terminal to Eurobeeb. Cube Beebflex adds a 6809 second processor to the BBC Micro enabling it to run the wide range of Flex software.

#### Stand 86

Johann Abeyesinghi, GCC (Cambridge) Ltd, 66 High Street, Sawston, Cambridge CB2 4BG. Tel: 0223-835330 and 834641.

GCC will be exhibiting their second processor with the acclaimed sage integrated accounts package. This show sees the launch of their new super fast random access database – starbase – capable of handling up to 4096 records. Also on display will be their range of disc drives, the GCC Romex 13 and other peripherals.

#### Stand 90

The Micro User, Europa House, 68 Chester Road, Hazel Grove, Stockport SK7 5NY. Tel: 061-456 8383.

There's a wealth of fascinating material for every BBC Micro user on this, our most exciting stand ever! We've got all the back issues of Micro User, so you can stock up on those vital articles you may have missed

can stock up on those vital articles you may have missed
– and our latest issue will be there, hot off the press.

We're using the show to launch a complete new

range of cassettes and discs: our Action Replay series. We've managed to pack three of the most popular Micro User games onto each Replay. With six Replays in the range, you'll be spoiled for choice.

We're also unveiling our Arcade Classics compendium. Available on cassette or disc, Arcade Classics offers incredible value for money, featuring as it does three top rate machine code arcade games and one rip-roaring real time adventure.

In addition we'll have the complete range of Beeb Body Building packs – the answer to all your interfacing problems – as well as a cassette of all the software from year one of the series.

You'll be able to buy ready-built, the Micro User Light Pen, the revolutionary Sound to Pattern converter and the best-selling real-time clock. All in all, the Micro User stand, like the magazine, is a must for all BBC Micro

#### Stand 93

MRM Software, 17 Cross Coates Road, Grimsby DN34 4QH. Tel: 0472 44304.

MRM Software are a supplier of top quality games programs for the BBC and Electron micro including Qman, Qmans Brother 3D Munchy, Diamond Mine, Banana Man and many more. Competitively priced at just £5.75. All their software is on sale at the show. MRM will have several new games which will be released for the very first time at the show. They will also be running a daily competition open to all purchasers of MRM software with £45 worth of software being the prize.

#### Stand 94

**0.1.C.,** 15 Burghead Close, College Town, Camberley, Surrey GU15 4XL. Tel: 0344 773229.

Looking for something other than Space Invader games? If so, then visit us on stand 94 and try our original and captivating products. We offer a range of simulation, strategy, educational and utility programs. Several new products will be launched at the show, including: Artisan 1; Sixers; and the first of our "learning through experience" range.

#### Stand 95

**British Micro,** Penfold Works, Imperial Way, Watford, Herts. Tel: 0923 48222.

New from world famous British Micro, a Hegatron Group company, is the Grafpad, the first low-cost graphic tablet to offer the performance and durability required for business, industrial and education applications. It is small, accurate and reliable and needs no adjustment or preventative maintenance. Bundled with the Grafpad is some sophisticated software to enable you to create pictures, diagrams, and designs within minutes of unpacking. All micros in the British Micro 804 family support the Grafpad, which sells at the remarkably low price of £125 + VAT.

#### Stand 98

**Beebugsoft,** P.O. Box 109, High Wycombe, Bucks. HP11 2TD. Tel: 0727 60263.

Beebugsoft – specialists in application and utility software for the BBC Micro. The latest addition to our range is a general purpose utility called Toolkit, which speeds up the development of Basic programs. Toolkit is supplied on 8k Eprom and remains extremely easy to use, while offering powerful facilities, including: A screen editor for rapid program manipulation, enhanced error reporting, an efficient program compacter, bad program recovery, partial or total renumbering string search/replace (including keywords) – and much more. Other software on display includes Exmon, Design,

# Electronequip

**Hampshire** 

Authorised BBC Dealer & Service Centre

#### SPECIAL OFFERS



Electronequip is an authorised Acorn service centre and has been an Acorn dealer since the introduction of the Atom. Our demonstration facilities include 20 station Econet and Torchnet systems.

Ref	BBC Micros	Ex VAT	Inc VAT
ANB01	BBC Model B Micro Computer	348 26	399.00
ANB02	BBC Model B with Econet Interface	389.14	446.00
ANB03	BBC Model B with Disc Interface	409.14	469.00
ANB04	BBC Model B with Disc & Econet Interface	450 01	516.00

3" Micro Disc £129.95 (inc. VAT)

Disc Interface & Drive £198.95 (inc. VAT)

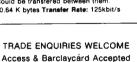
Micro Disc Drive for the BBC Micro

The Micro disc drive offers a method of low cost quick access to programs. The drive is essentially a small version of a 51" disc drive and offers similar features to the larger drive. The data is stored on a 3" disc, this is enclosed in a protective

hard plastic cassette which features a write protect switch. The micro drive requires the standard Acorn disc interface, but a new disc filing system rom. Acorn DFS may be exchanged for the micro DFS for £12.00. The new micro disc filing system allows 60 files per disc surface and it can read and write to Acorn DFS discs. Thus if a 51 inch and a micro floppy were connected on the same cable files could be transfered between them

Capacity: 80.64 K bytes Transfer Rate: 125kbit/s

Access & Barclaycard Accepted Large Stocks - 24 Hour Despatch Carriage 50p to £3.50







#### 14" TV/Monitor £217.00 + VAT

Ref.	Monitors	Ex VAT	Inc VAT
MNB1401	BMC 1401 Colour Monitor	225.00	258.75
MNCE370A	Cable CE 370A Colour RGB Monitor	199.00	228.B5
MNKVIS2	Kaga 12" RGB Monitor Vision II (Medium)	285.00	327.75
MNKVIS3	Kaga 12" RGB Monitor Vision III (Hi)	399.00	458.B5
MNM1431	Microvitec 1431 14" Colour Monitor (BBC)	215.00	247.25
MNM1441	Microvitec 1441 High Res 14" BBC Monitor	440.00	506.00
MNM1451	Microvitec 1451 Medium Res 14" BBC Monitor	325.00	373.75
MNN1534	Nordmende 14" TV/Monitor	217.00	249 55
MNN3534	Nordmende 14" TV/Monitor with remote control	234.00	269.10
MNN4430	Nordmende 20" Prestige TV/Monitor remote	417.00	479.55
MNN4432	Nordmende 22" Prestige TV/Monitor remote	458.00	526.70
MNN4437	Nordmende 27" Prestige TV/Monitor remote	512.00	588.80

#### SIDEWISE



#### SIDEWISE FITTED



"SIDEWAYS" rom board for BBC Micro. No soldering required £38.00 + VAT

RX-80 £263.12 + VAT

FX-80 £365.09 + VAT



Printer price includes cable for BBC and screen dump rom is available for £7.50

# Perfectly Made in Britain

Ref.	Torch Computers	Ex VAT	Inc VAT
TDZ80P	Torch Z80 Disc Pack (Dual 800K + Z80)	730.00	839.50
TC301	Torch Work Station (No monitor) (301)	1244.00	1430.60
TC303	Torch Work Station with TOSCA (No monitor)	1449.00	1666.35
TC401	Torch Computer twin 400K (new style)	2250.00	2587.50
TC403	Torch Computer twin 400K & TOSCA (grey)	2455.00	2823.25
TC68000	Torch Computer twin 400K Floppy & 68000	3550.00	4082.50
TC68020	Torch Computer 20Mb Hard Disc & 68000	5900.00	8785.00
TCF500	Torch Computer twin floppies (CF500)	2950.00	3392.50
TCFS500	Torch Computer twin 400K & TOSCA (CH500)	3150.00	3622.50
TCH520	Torch Computer 20Mb Winchester CH520	5850.00	6497.50
TCHS520	Torch Computer 20Mb Hard Disc & TOSCA	5850.00	6727.50
TMC240	Torch Calaur Monitor (MC248)	575.00	661.25



Electronequip

Kings Lynn Branch Tel: 0553 3782



36-38 West Street, Fareham, Hants (0329) 230670

# Electronequip

## Hampshire

Authorised BBC Dealer & Service Centre

## DISC DRIVE + INTERFACE



## DISC DRIVE £113.00 (+VAT)

#### MCD 1 MICRODRIVE from ELECTRONEQUIP

We are pleased to announce that the MCD 1 Micro drive is now a reality, and available Ex-stock from Electronequip.

The Drive is single sided and stores 80K Bytes formatted (100K unformatted). It comes complete in a case, with cables and formatting disc. It incorporates all the Acorn DFS calls and with the ability to address 5.25" and 3" drives (\*MICRO and \*MINI).

An operating manual will be available, giving a breakdown of all the commands and their use.

The cost of the drive is £129.95 including VAT and the interface can either be bought as a package for £198.95 (for both drive and Interface). Alternatively we will exchange your Acorn DFS for a Micro-DOS EPROM for £13.80 or sell you the Micro-DOS EPROM for £25.00. Diskettes are £4.30 +VAT each.

Reference	Description	Exc VAT	Inc VAT
DDEMDO1S	Elect 80K Single Micro Disc Drive	113.00	129.95
DS3M45S	3" MCD 45T Single-sided Disc	4.30	4.95
UGMDISC	Micro Disc Upgrade (I/F and Single Drive)	173.00	198.95
UGMIDOS	Micro DOS/Acorn DFS exchange ROM	12.00	13.80
SPMDISCR	Micro Dos BOM (DES for Micro Disc)	21 74	25.00

See our price list for full details.



Electronequip



36-38 West Street, Fareham, Hants (0329) 230670



Computer Technology

USFRS & DFALFRS

Stand No 8

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ELECTRON JOYSTICK INTERFACE

- Works with 80% arcade games
- Made for standard 9 pin joysticks

Also available

## 'PRINTPORT" £44.10

CENTRONICS PRINTER INTERFACE

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For all your computing requirements

ACC	<b>DRN</b>		SINC	LAIR		COM	MODORI	E
ATARI		DRA	GON		<b>ORIC</b>		<b>MEMOT</b>	ECH

Huge Software Range

Stand No 44

8 Central Parade, St Marks Hill, Surbiton, Surrey. (50 yards from the Station) Tel: 01-390 5135

Open 9.30am-6.30pm (Mon-Sat)

Paintbox, Spellcheck, Sprites, Teletext Editor, Masterfile and Superplot.

#### Stand 109

Advanced Memory Systems, Green Lane, Appleton, Warrrington WA4 5NG. Tel: 0925 62907.

AMS will be selling the Hitachi 3" disc drives. The ultimate disc drive package, tailored to your BBC Micro, it is compatible with all disc interfaces and includes cables and comprehensive manual and utilities on disc and Eprom. Housed in a steel case, matching the BBC Micro, these reliable and robust Hitachi 3" disc drives are the ultimate for home, office and classroom.

#### Stand 111

Minor Miracles, P.O. Box 48 Ipswich IP4 2AB. Tel: 0473 50304

"World Standard" Modem – Multi-speed 75 to 1200 baud, Prestel, Micronet and British Telecom Gold, USA and European standards. Ready to run on BBC, only £99.95 excl. Graphics Digitizer — 40+ graphic commands, auto-shape, colour fill, save screen, print screen. Includes cassette software, worksheet and manual. Outstanding value £29.95 excl. Light Pen — Freehand drawing with fine, medium or heavy line. Eight colour pallette, save and printout pictures, includes cassette software. Unbeatable price only £12.95 excl. Control Interfaces — Control the outside world up to mains voltages, opto-isolation for total safety. Combinations from four input to 12 output channels.

#### Stand 112

Cumana, The Pines Trading Estate, Broad Street, Guildford, Surrey GU3 3BH. Tel: Guildford 503121.

#### Stand 113

Electron User, Europa House, 68 Chester Road, Hazel Grove, Stockport SK7 5NY. Tel: 061-456 8383.

Electron User is now an independent magazine, having left the shelter of its elder brother, The Micro User in February. We've now got a stand of our own where we can meet our fellow Electron users and discuss the latest software and hardware releases. We'll also be talking about our plans for the magazine and listening to what you want from us. If you have an Electron or are thinking of buying one then come along to the stand and have a chat about what you want from Electron User.

#### Stand 120

Alligata Software, 178 West Street, Sheffield, South Yorkshire S1 4ET. Tel: 0742 755796.

Exciting new programs for the BBC Model B are being launched for the first time by Alligata Software of Sheffield at the BBC Micro User Show. Alligata have already established a strong reputation for high quality games and home/business utilities. Features of their games are the application of fast-action machine coding, top-quality graphics and imaginative sound effects. These features have been continued with the new range of programs now being launched: Neanderthal Man, Web Runner, Blagger and "The Upgrade".

#### Stand 123

**Alpha Disc,** Unit 2, Crabtree Road, Thorpe Industrial Estate, Egham, Surrey TW20 8RN. Tel: 0784 35357. Alpha Disc are the specialists in floppy disc drives. As

UK distributors for Canon Electronics we are pleased to offer a range of products including the new ultra slim model 221 (DS 40/80 track) disc drives which come in quality cases with all cables, plus our own utilities and manual. The new range also features a compact low heat generation switching power supply. All products are sold with a one year warranty on parts and labour. All product support is provided direct by Alpha Disc. Come and see the disc drive experts on stand 123.

#### Stand 132

Time Zones.

Peripheral equipment and supplies for the BBC Micro

#### Stand 133

Optima Software, 36 St. Petersgate, Stockport SK1 1HL. Tel: 061-456 8836.

Optima Software continues to go from strength to strength. Following its successes with its earlier games – Sea Wolf, Asteroid Miner and Atomic Protector – Optima has released, specially for this show, Omega Probe and Bedbugs.

Omega Probe, a fast, furious, enthralling game set in deep space, has already been widely acclaimed for its excellent graphics and exciting action. Such is its quality that it has been chosen for the attempt on the "arcade game playing" world record at the Show's opening.

Continuing the same high standards of originality and entertainment, Bedbugs promises to be one of the most successful family games of 1984. It's unique theme will provide hours of enjoyment.

Optima will also be displaying its highly praised teletext editor. Datext. Packed with many powerful and easy-to-use features. Datext is selling like hot cakes—particularly in the field of education.

Directed specifically at education, Marklist, an assesment score database, is already proving to be the answer for many teachers who feel stifled by the "book-keeping" aspects of their work.

#### Stand 134

First Byte Computers, 10 Main Centre, Derby DE1 2PE. Tel: 0332 365280.

At last! An Electron joystick interface available NOW. This is the add-on every Electron user will want – a plug in cartridge which takes all standard "Atari-style" self-centring joy sticks. First Byte will have interfaces to sell at the show and will have Electron software on display which supports the interface. There will shortly be a host of games available from all the major software houses which will make the First Byte interface the standard.

#### Stand 136

Silent Computers, 27 Wycombe Road, London N17 9XN. Tel: 801 3014.

Silent Computers will be showing the very successful Expandable Console for the BBC Micro as supplied to Universities, colleges businesses and home users, together with matching printer stands and VDU stands. The bolt-on extra module for the console will also be available. And for the the FIRST time on show to the public the specially designed Electron Console to house the Electron with room for the expansion interfaces and room for cassette storage and later for disc owners. Up to two halfheight drives can be housed in the console. The complete unit can be safely carried without

disconnecting the micro/expansion interfaces/cassette/drives etc.

#### Stand 137

News-Soft, 196 Milburn Road, Ashington NE63 OPH. Tel: 0670 812194.

News-Soft are bringing to the show their interface which allows the very wide range of Atari compatible joysticks to be used with the BBC Micro! Unlike other interfaces, the News-Soft interface utilises the existing joystick port, thus eliminating the time consuming process of loading and programming software to drive the joystick. This interface is compatible with all but a few of the games configured for joystick operation. (Trade enquiries welcome.) We will also be featuring the fabulous Quickshot joysticks as well as BBC dust covers and the latest best selling software.

#### Stand 138

CTS Recognition, 32 Savile Row, London W1X 1AG. .
Tel: 01-734 8826.

CTS Recognition is demonstrating the "professional" graphics tablet. This high resolution and accurate tablet permits users to sketch, draw, trace and input diagrams, shapes and cursor movements quickly and accurately with stylus or cross wire cursor directly into a BBC computer. This British quality tablet is intended for serious students, designers, artists, cartographers, engineers and business men. The "Cadpak-D" general graphics disc based software is also on show which is probably the most advanced CAD/Graphics package available on a BBC computer. CTS "Hova Mouse" can be seen. The cursor can be tracked while in the air and tablet can even be under a

desk. Being a hard tablet, the writing surface never wears out. It does not suffer the wear problems of coarse pressure pads.

#### Stand 139

Kansas City Systems, Unit 3, Sutton Springs Wood, Chesterfield S44 5XF.

Pinball Arcade, the only game to achieve FIVE 5 star ratings in the computer press (including Beebug) is now also available for the Electron as well as the BBC. The recognised typing standard, Microtype, is also now available for the Electron, as are a couple of our adventures. Kansas is the company which offer a lifetime guarantee on all its programs as well as assured return post service for those who purchase through the post. Credit cards accepted of course.

#### **Technical Advice Stand**

A focal point of the last show, we've expanded the Technical Advice Stand in terms of both size and staffing.

Now everyone will get a chance to have their programming problems and hardware hang-ups sorted out by our team of experts.

Jim Notman, Chris Martin, Ian Murray and Mick Mahon – aided and abetted by the editors of Micro and Electron User – will be doing their best to answer your queries. They may not be able to solve all your problems, but they promise to have a darn good gol

Incidentally, if you've got any ideas for the magazine, this is the place to air them . . .



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displays the co-ordinates of your screen area. The co-ordinates are based on the screen with a grid size of 1023 x 1279 pixel, also in the Grafpad giving you a grid size of 320 x 256 pixels!

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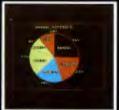
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Purchase unique C.A.D. (Computer Aided Designs) programme and add further enjoyment and professionalism to your computer designs!

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(The above designs were drawn by a 12-year-old at our showrooms!)

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